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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER ZHAO, XIAO SI	
			ART UNIT	PAPER NUMBER
			1792	
			NOTIFICATION DATE	DELIVERY MODE
			09/02/2009	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/588,213	<b>Applicant(s)</b> AYDIN ET AL.	
	<b>Examiner</b> XIAO ZHAO	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**2. Claims 12-13 and 15-17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hughes et al. (GB 1276381).**

#### *Per independent claim 12:*

Hughes et al. teach a method of applying two liquid coating compositions (pg. 6, 34-36) in the form of a dispersion (pg. 7, 4-8) on a substrate such as a web (page. 3, 109-112). The composition contains synthetic polymers such as polyvinyl alcohol (page 7, 130). The number of individual layers may range from two to as many as ten or more (pg. 7, 53-56) and the flowable media are applied using a cascade die (see Fig. 1, 6, 7, and 8). Example 13 shows a multilayer that has different chemically flowable media (pg. 14, example 13). Example 17 shows a two-layer coating wherein the top layer has 103 g/m<sup>2</sup> and the bottom layer has 21.6 g/m<sup>2</sup> (pg. 14, example 17). It is clear that the total amount applied is between 2 g/m<sup>2</sup> to 200 g/m<sup>2</sup> and that the ratio of the thickness between the top and bottom layer also falls between 0.1 to 100.

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Per claim 13, the composition contains synthetic polymers such as polyvinyl alcohol (page 7, 130 to page 8, 1). It is known that polyvinyl alcohol has inherent adhesive properties and therefore the composition functions as an adhesive material.

Per claim 15, the support (substrate) that can be utilized are of film base, paper, polymeric film, and etc. (pg. 8, 7-23).

Per claim 16, an adhesion promoting layer is used (page 7, 43-46).

Per claim 17, since the compositions are simultaneously applied to the substrate, it meets the definition of applying it in "one pass".

Per claim 20 the photographic layers can be materials such as silver halides (metal complex) and the layer can contain colloids such as synthetic polymers (pg. 7, 114-130).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al. (GB 1276381) in view of Kitamura et al. (US 2003/0134093).**

Per claim 14, Hughes et al. teach all the limitations of claim 12 but fail to teach that the substrate is a composite or high-gloss film.

Kitamura et al. teach that in forming photographic images, ink receiving layers are used ([0060]) and the ink receiving layers can be high-gloss films ([0083]).

It would have been obvious to a skilled artisan to apply the flowable media, as taught by Hughes et al., onto a high-gloss film, as taught by Kitamura et al. One would have been motivated to do so because since Hughes et al. teach a method of applying photographic elements to a substrate, a skilled artisan would use a known film used in photographic manufacturing such as high-gloss film as a media receiver, or a substrate, to achieve certain aesthetic results with the final photographic product.

**6. Claims 18-19 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al. (GB 1276381) in view of Yoshioka et al. (US 6485898).**

Hughes et al. teach all the limitation of claim 12, and further teach that the method can be utilized to coat any material or mixture of materials which can be put in liquid form (pg. 7, 3-10); various surfactants can be used to modify surface tension and coatability of the photographic coating such as anionic and non-ionic surfactants (pg. 8,

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23-40); and the reference expresses the desirability for substantially no intermixing between adjacent layers to achieve good separation between the layers (pg. 3, 3-12).

Hughes et al. does not teach the photographic composition can contain aqueous solutions of polymers, layering of cationic and anionic polymers, the composition contain polyisocyanate, polyepoxides, or polyacrydines, the composition are applied as individuals layers such as styrene-butadiene dispersions, acrylate, ethylene, vinylacetate dispersions, polyurethane dispersions, wax emulsions, or silicone emulsions are used as release coat layers, and a first thin layer servers to improve wettability on the release coat.

Yoshioka et al. teach a photographic composition/material.

Per claim 18-19, Yoshioka et al. teach that a polymer dispersible in an aqueous solvent is particularly preferred as the photographic composition (col. 23, 65-67) and that the dispersing agent can be anionic or cationic surfactants (col. 18, 31-46). Since the reference also teaches cationic with anionic dispersions, the layering would also tend toward gelling or coagulation.

Per claim 21, Yoshioka et al. teach that a hardening agent may also be added such as polyisocyanate to the composition (col. 39, 28-38).

Per claim 22, Yoshioka et al. teach that the polymers may be crosslinked (col. 24, 5-8). A crosslinking agent may be used (col. 26, 5-7).

Per claim 23, Yoshioka et al. teach styrene/butadiene copolymer latex can be used in the composition (col. 25, 38-50), dispersions such as acrylates, ethylene, acrylic acid, can be used, for example as an intermediate layer (col. 49, 53-58), wax emulsion

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can also be used (col. 69, 48-50). While Yoshioka et al. does not specify that the wax emulsion can be used as a release coat, it is well known in the art that release coats are used to prevent unwanted adhesion between layer and substrates during high temperatures, and thus, it would have been obvious to use the wax emulsion as the release coat so a more desirable multilayer photographic coating can be achieved on a substrate.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the photographic composition/material taught by Yoshioka et al. as the composition in Hughes et al. because both references deal with photographic composition and Hughes et al. recites that the method can be utilized to coat any material or mixture of materials which can be put in liquid form (pg. 7, 3-10). In addition, choosing and manipulating various chemical compounds, surfactants (cationic or anionic), and using different dispersions as layers will be obvious to the ordinary artisan in order to achieve a desirable final multilayer because Hughes et al. express the desirability for substantially no intermixing between adjacent layers to achieve good separation between the layers (pg. 3, 3-12). The purpose of the different compounds and surfactants, in the instant application and references, are to achieve the same effect of good layer separation and no intermixing.

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**7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al. (GB 1276381) in view of Yoshioka et al. (US 6485898) and further in view of Wilson (US 5254661).**

Hughes et al. in view of Yoshioka et al. teach all the limitations of claim 23. The references fail to teach that a first thin layer is deposited to improve the wettability of the release coat.

Wilson teaches that a wash coat can be used to improve the wettability of the release coating (col. 3, 60-65).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a wash coat (reads on "a first thin layer"), as taught by Wilson, as a first thin layer to improve the wettability of the release coat as taught by Hughes et al. in view of Yoshioka et al. because this is the combination of two known methods to achieve a predictable result (improved wettability). One would want to improve the wettability of the release coat because it is desirable for the release coat to have a strong contact with the first layer and thus, the substrate that the first layer is coated on, to improve the overall integrity of the multi-layer. .

### ***Response to Arguments***

8. The examiner thanks the Applicants for recognizing the error in PTO-892 mailed 1/21/2009. The proper Yoshioka et al. patent (6,485,898) is included in the PTO-892 attached with instant Office Action.



9. The claim objection and U.S.C. 112 rejection from the Office Action mailed 1/21/2009 are withdrawn.

10. Applicant's arguments with respect to claims 12-24 have been considered but are moot in view of the new ground(s) of rejection as necessitated by amendment.

a. Applicants' newly added claims that contain amendments or newly added matter were rejected with new ground(s) of rejection as necessitated by amendment (see above).

b. Applicants argue that Hughes et al. does not teach or suggest the limitations of a multilayer application ranging from  $2 \text{ g/m}^2$  to  $200 \text{ g/m}^2$  and having a ratio from 0.1 to 100. This is not persuasive because Example 13 shows a multilayer that has different chemically flowable media (pg. 14, example 13). Example 17 shows a two-layer coating wherein the top layer has  $103 \text{ g/m}^2$  and the bottom layer has  $21.6 \text{ g/m}^2$  (pg. 14, example 17). It is clear that the total amount applied is between  $2 \text{ g/m}^2$  to  $200 \text{ g/m}^2$  and that the ratio of the thickness between the top and bottom layer also falls between 0.1 to 100.

c. Applicants argue that there is no teaching or suggestion in the patent of Yoshioka et al. that would motivate one of skill in the art to practice an embodiment of depositing plural numbers of layers onto a substrate from a multi-film forming applicator device where two material layers are such that, when normally played into contact with each other, tend to gel or coagulate. This is not persuasive because Hughes/Yoshioka teach the composition with cationic polymer in anionic dispersion. Therefore, since it's the same composition, the

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layers would also tend toward gelling or coagulation. Motivation to combine Yoshioka with Hughes is stated above in section 6.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAO ZHAO whose telephone number is (571)270-5343. The examiner can normally be reached on Monday to Friday 8:30 am EST to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on (571)272-1303. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Xiao S Zhao/  
Examiner, Art Unit 1792

/Michael Kornakov/

Supervisory Patent Examiner, Art Unit 1792